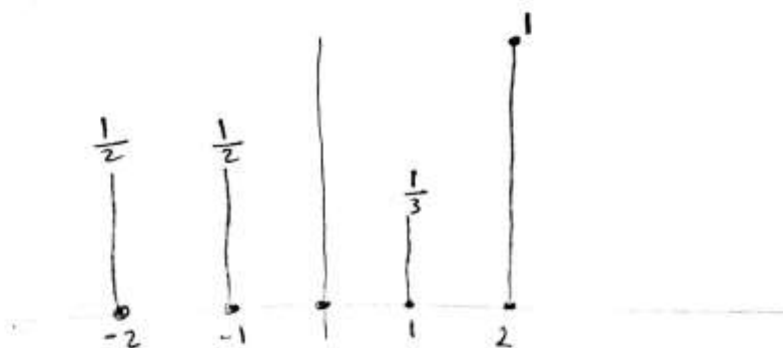


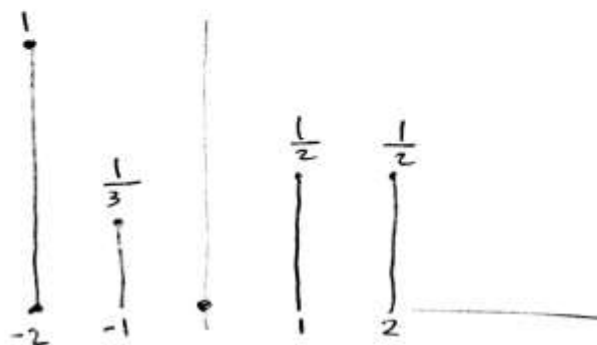
Sheet 1DSPSec 1

$$x(n) = \left\{ \frac{1}{2}, \frac{1}{2}, 0, \frac{1}{3}, 1 \right\}$$

a) sketch



b) Folding  $x(-n)$

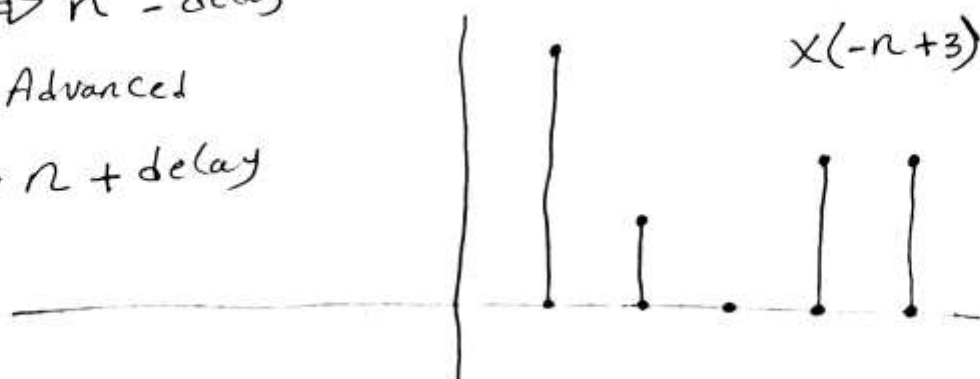


c) shifting (delay) for b by 3

$n \Rightarrow n - \text{delay}$

but for Advanced

$n \Rightarrow n + \text{delay}$



1

Sec 1

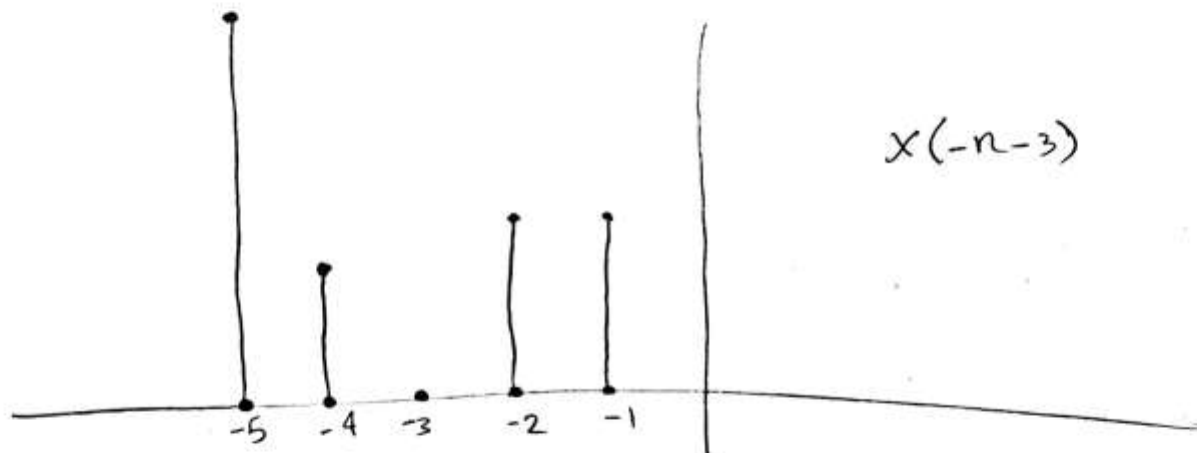
For the same example

$$x(n) = \left\{ \frac{1}{2}, \frac{1}{2}, 0, \frac{1}{3}, 1 \right\}$$

→ delay

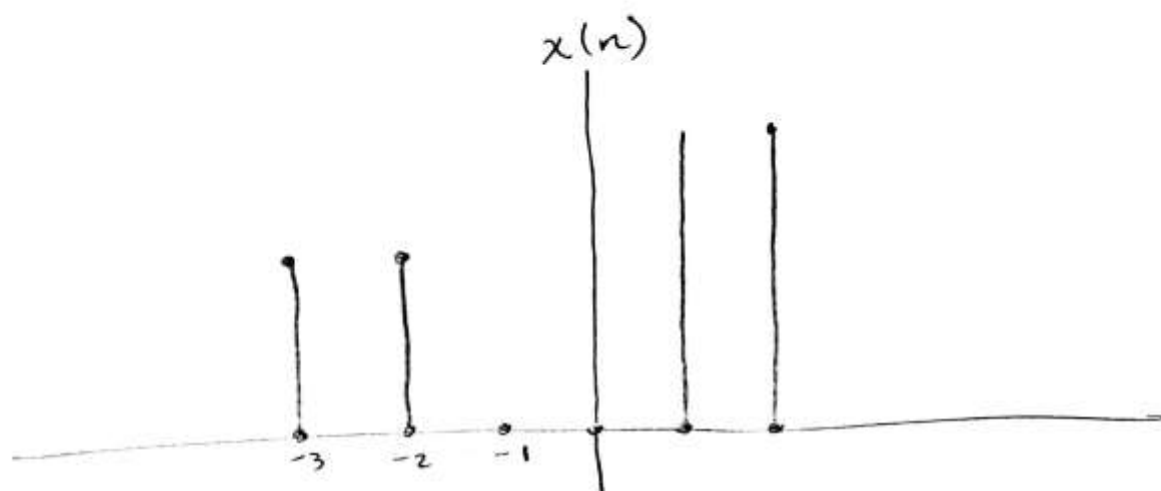


→ Folding

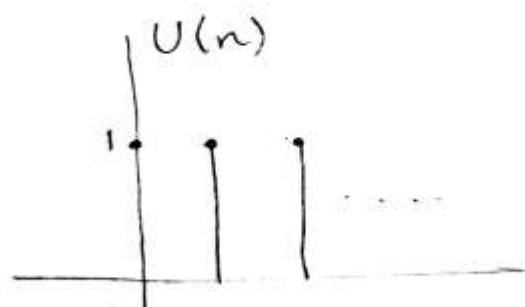


2 sec 1

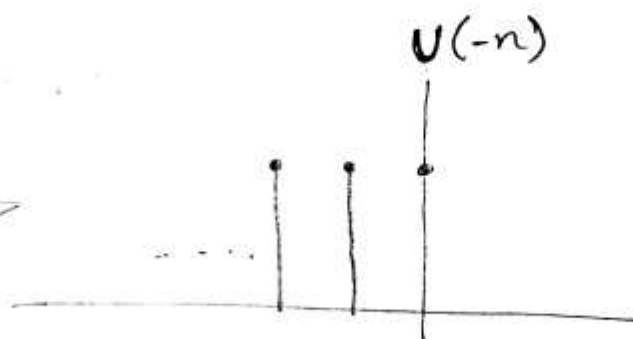
$$* \quad x(n) = \left\{ \frac{1}{2}, \frac{1}{2}, 0, 0, 1, 1 \right\}$$



$$\rightarrow x(n) \quad U(2-n)$$



$\Rightarrow$



← هنا عملنا (Fold) ثم (shift)

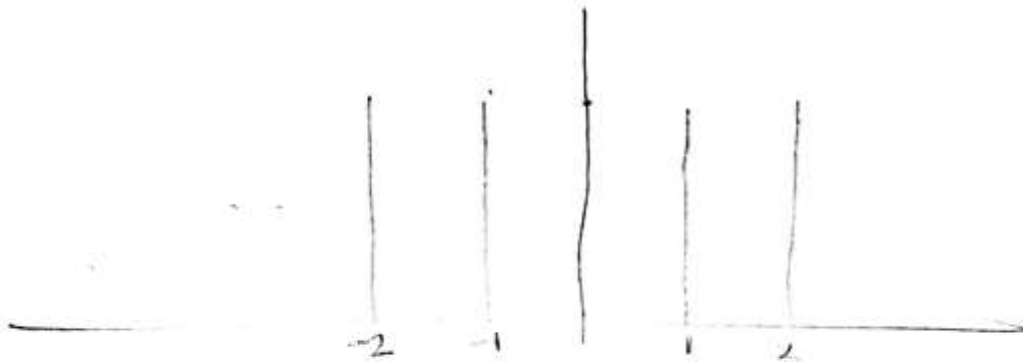
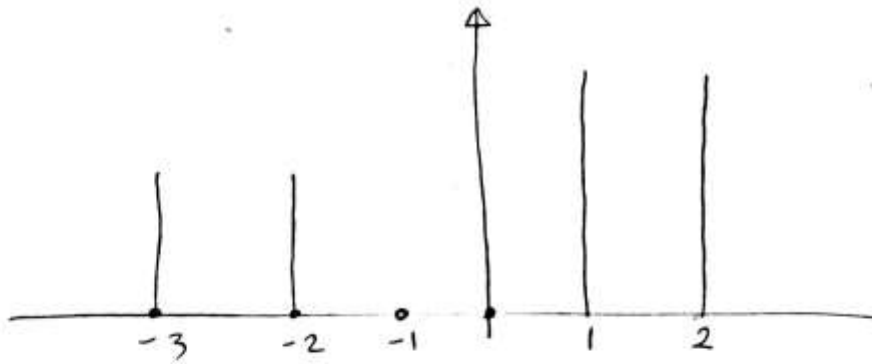
ليس لو جربت العكس (shift)

ثم (Fold) هيطالع نفس الناتج.

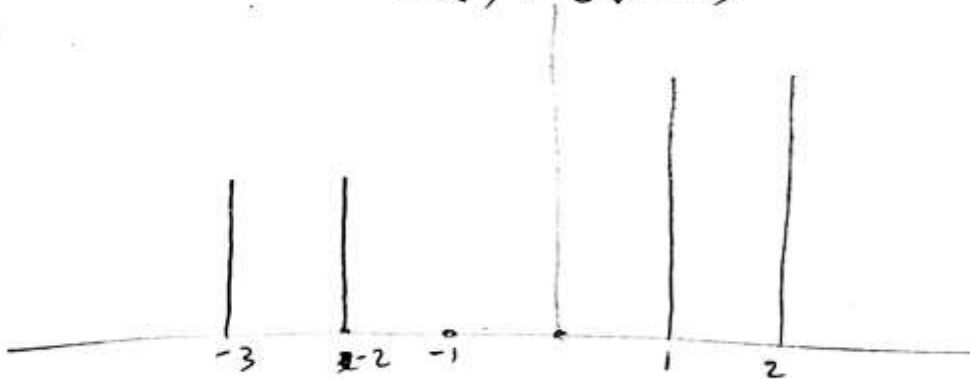
$\Downarrow$   $U(2-n)$



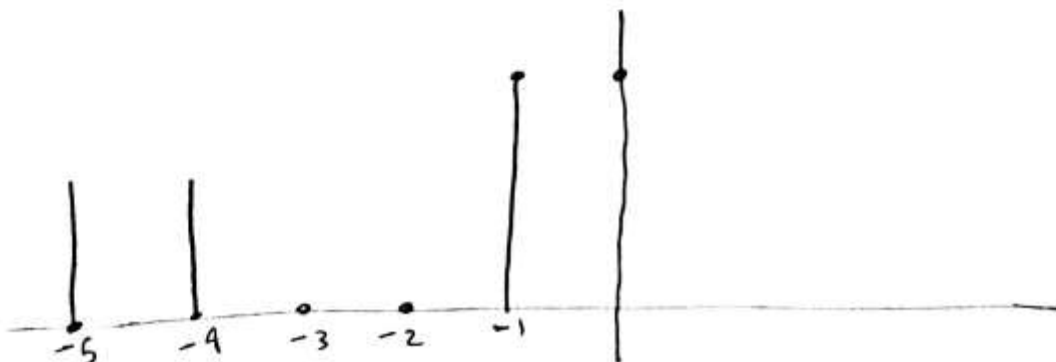
37 Sec 1



$$x[n] * u[2-n]$$



→ Find  $x[n+2]$  &  $\delta[n-2]$



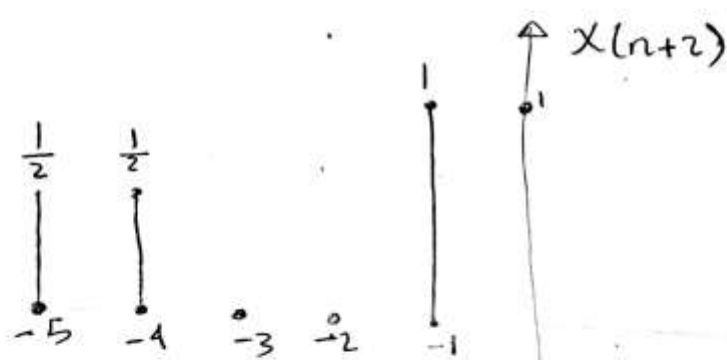
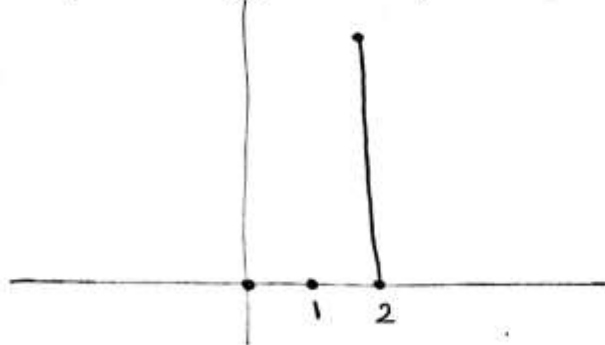
[4] sec 1

$\delta(n)$



$\Rightarrow$

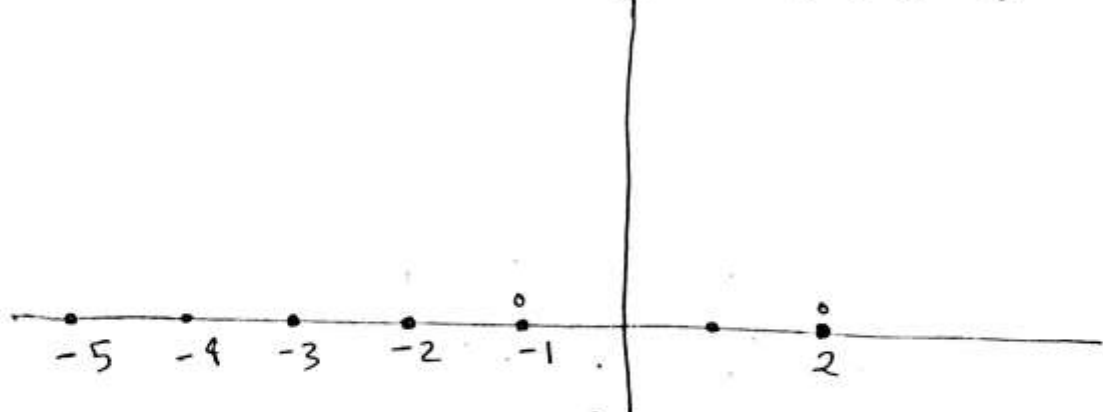
$\delta(n-2)$



$\delta(n-2)$

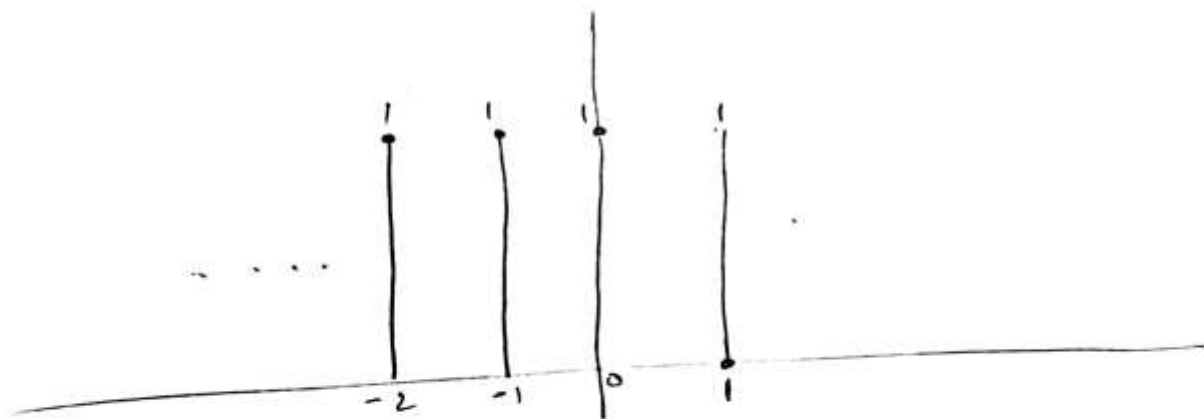
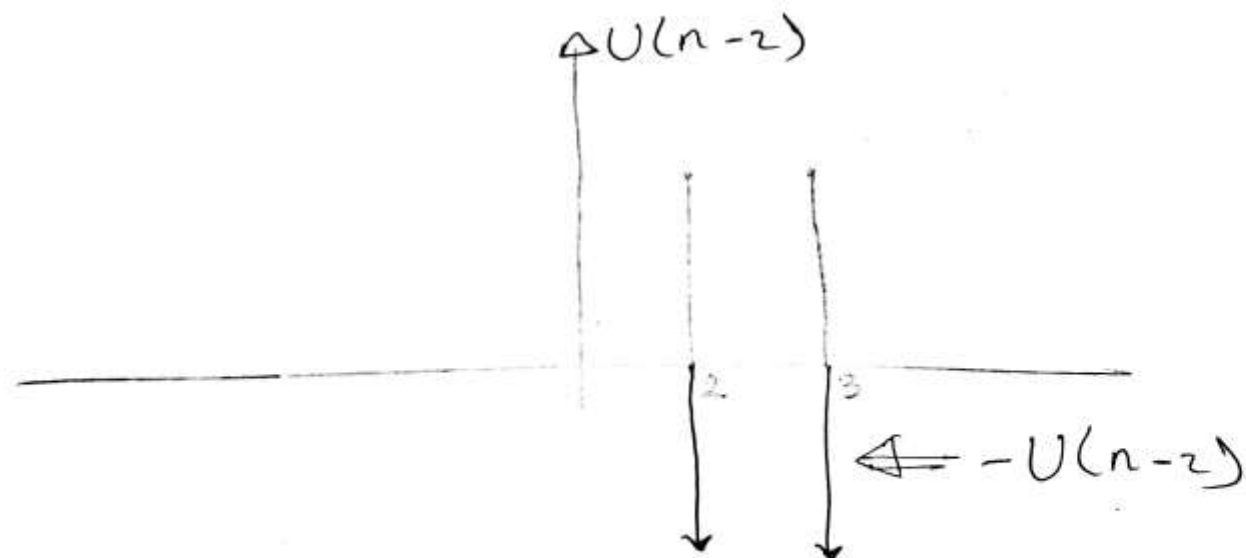
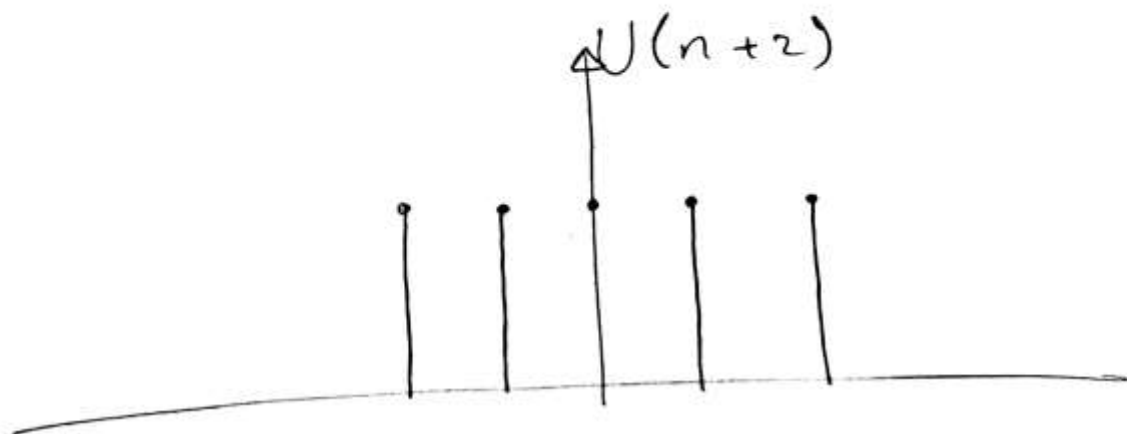


$x(n+2] \delta(n-2)$



$\boxed{5}$  Sec 1

$$* x(n) = V(n+2) - U(n-2)$$



$$x(n) = \{1, 1, 1, 1\}$$

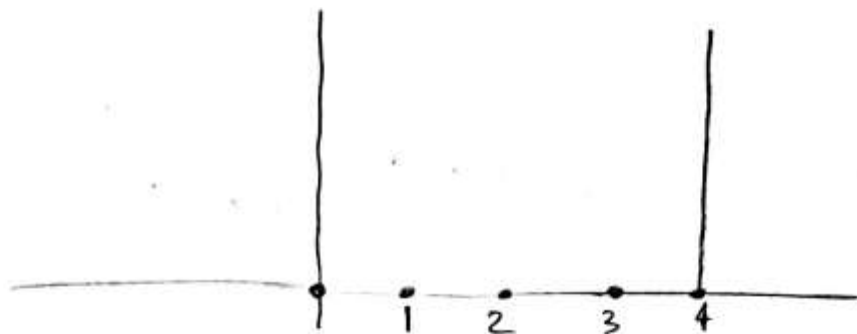


[6] sec 1

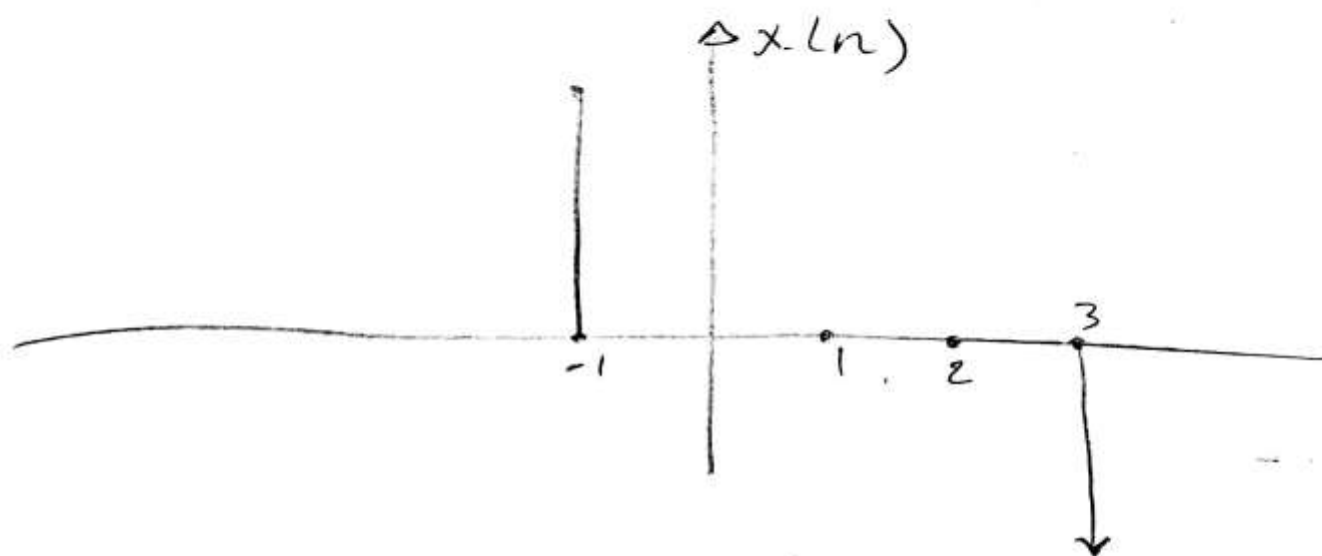
$$x(n) = U(n-2) \delta(n-4)$$

$$x(n) = \{0, 0, 0, 0, 1\}$$

← بمجرد النظر



$$* x(n) = \delta(n+1) - \delta(n-3)$$



$$x(n) = \{1, 0, 0, 0, -1\}$$

7 sec 1

$$* \quad x(n) = U(n) + Y(n-2) - Y(n-5) \\ - Y(n-8) + Y(n-11)$$

Report

Q<sub>1</sub>: sketch

$$Q_2: x(n) = \{ 2, \underset{\uparrow}{1}, \frac{1}{2}, \frac{1}{4}, \frac{1}{8} \}$$

Find

$$\begin{array}{cc} x(-n-2) & \cdot \quad x(n-2) \\ x(n+2) & \cdot \quad x(-n+2) \end{array}$$

[8] sec 1